

that the interior of the earth has a much higher temperature than its surface. From the experiments of Professor Mitcherlich and others, we learn that mineral substances may be made to assume a crystalline form when cooled from a state of fusion; and this result, connected with other facts, proves that many of the crystalline rocks were produced by the agency of fire. The existence of more than two hundred active volcanoes affords evidence that there is an intense internal heat; and the lavas they eject are so analogous in appearance and composition to certain of the trap-rocks, that it is not possible to deny them an identity of origin. These observations have compelled geologists, in spite of early prejudices, to admit the agency of fire in the production of some rocks, and in modifying, if not in producing, the present state of the earth's crust. We should not, perhaps, greatly err from the truth, were we to state that all the causes which are now instrumental in producing a change in the relations of land and water have always been active, and at former periods produced much more violent effects than they do at the present time. However disastrous and sudden may be the changes which occasionally affect certain districts, their effects are, doubtless, but trifling, when compared with those which were not of unfrequent occurrence during the formation of the earth's crust. This remark is as true in relation to the agency of fire as to that of water. The causes of disturbance are now placed under a control which they themselves were made instrumental in producing,—a circumstance that gives us a high sense of the arrangements which the Creator adopted in the first constitution of the earth.

The exhibitions of Tomboro, Teneriffe, and other large volcanic mountains, are not worthy to be compared with the energy of the same force, when it upheaved continents, formed mountain chains, and covered the face of countries and continents with lavas. All nature is now in a comparative state of repose; the forces that once devastated the earth with an internal and superficial war have almost ceased to act; and the earth being thus prepared for the residence of man, he is permitted to enjoy the patrimony that God has given, with little disturbance from those numerous enemies by which he is surrounded.

The appearances that are presented by rocks in almost all